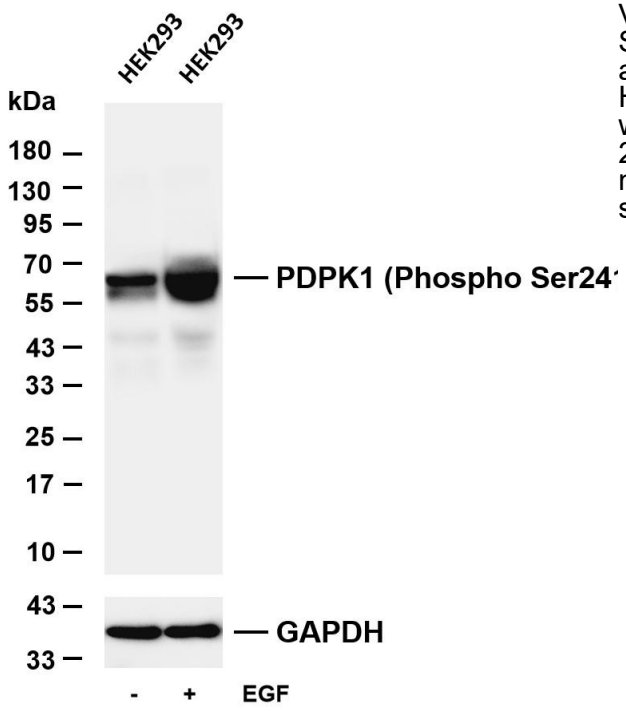
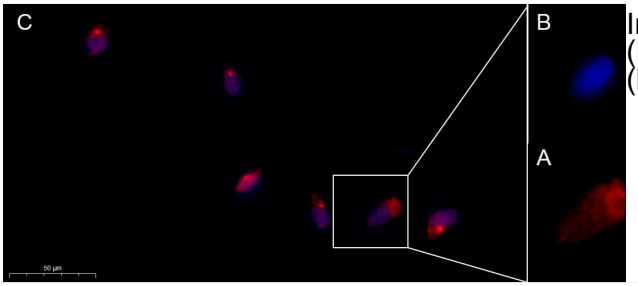
PDPK1 (Phospho Ser241) Rabbit mAb

Catalog No	YP-rAb-18444
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IF,IP,ELISA
Gene Name	PDPK1
Protein Name	3-phosphoinositide-dependent protein kinase 1
Purification Process	Protein A
Specificity	Phospho-PDK1 (S241) Antibody detects endogenous levels of PDK1 protein only when phosphorylated at S241.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):ANsFV
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200;
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	PDPK1 ; PDK1 ; 3-phosphoinositide-dependent protein kinase 1 ; hPDK1
Observed Band	63kD
Calculated Molecular Weight	63kD
Cell Pathway	Cytoplasm. Nucleus. Cell membrane; Peripheral membrane protein. Cell junction, focal adhesion. Tyrosine phosphorylation seems to occur only at the cell membrane. Translocates to the cell membrane following insulin stimulation by a mechanism that involves binding to GRB14 and INSR. SRC and HSP90 promote its localization to the cell membrane. Its nuclear localization is dependent on its association with PTPN6 and its phosphorylation at Ser-396. Restricted to the nucleus in neuronal cells while in non-neuronal cells it is found in the cytoplasm. The Ser-241 phosphorylated form is distributed along the perinuclear region in neuronal cells while in non-neuronal cells it is found in both the nucleus and the cytoplasm. IGF1 transiently increases phosphorylation at Ser-241 of neuronal PDPK1, resulting in its translocation to other cellular compartments. The

	tyrosine-phosphorylated form colocalizes with PTK2B in focal adhesions after angiotensin II stimulation.
Tissue Specificity	Appears to be expressed ubiquitously. The Tyr-9 phosphorylated form is markedly increased in diseased tissue compared with normal tissue from lung, liver, colon and breast.
Function	Catalytic activity:ATP + a protein = ADP + a phosphoprotein.,Function:Phosphorylates and activates not only PKB/AKT, but also PKA, PKC-zeta, RPS6KA1 and RPS6KB1. May play a general role in signaling processes and in development (By similarity). Isoform 3 is catalytically inactive.,PTM:Phosphorylated on tyrosine and serine/threonine. Phosphorylation on Ser-241 in the activation loop is required for full activity. PDK1 itself can autophosphorylate Ser-241, leading to its own activation.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PDK1 subfamily.,similarity:Contains 1 PH domain.,similarity:Contains 1 protein kinase domain.,subcellular location:Membrane-associated after cell stimulation leading to its translocation. Tyrosine phosphorylation seems to occur only at the plasma membrane.,subunit:Interacts with TUSC4.,tissue specificity:Appears to be expressed ubiquitously.,
Background	catalytic activity:ATP + a protein = ADP + a phosphoprotein.,function:Phosphorylates and activates not only PKB/AKT, but also PKA, PKC-zeta, RPS6KA1 and RPS6KB1. May play a general role in signaling processes and in development (By similarity). Isoform 3 is catalytically inactive.,PTM:Phosphorylated on tyrosine and serine/threonine. Phosphorylation on Ser-241 in the activation loop is required for full activity. PDK1 itself can autophosphorylate Ser-241, leading to its own activation.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PDK1 subfamily.,similarity:Contains 1 PH domain.,similarity:Contains 1 protein kinase domain.,subcellular location:Membrane-associated after cell stimulation leading to its translocation. Tyrosine phosphorylation seems to occur only at the plasma membrane.,subunit:Interacts with TUSC4.,tissue specificity:Appears to be expressed ubiquitously.,
matters needing attention	Avoid repeated freezing and thawing!
Usage suggestions	This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-PDPK1 (Phospho Ser241) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: HEK293 Lane 2: HEK293 was treated with EGF(100ng/ml) for 20 minutes Predicted band size: 63kDa Observed band size: 63kDa



Immunofluorescence analysis of HeLa . Picture A: PDPK1 (Phospho Ser241) Rabbit mAb (red). Picture B: DAPI (blue). Picture C: Merge of A+B